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10/062,622

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Jyri Sintonen

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08/31/2005

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EXAMINER

TORRES, JUAN A

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 08/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/062,622

Applicant(s)

SINTONEN, JYRI

Examiner

Juan A. Torres

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

The modifications to the drawings were received on 08/08/2005. These modifications are accepted by the Examiner.

Specification

The modifications to the specification were received on 08/08/2005. These modifications are accepted by the Examiner.

Claim Objections

In view of the amendment filed on 08/08/2005, the Examiner withdraws claim objections to claims 4, 5, 15, 16 and 17 of the previous Office Action.

Claim Rejections - 35 USC § 112

In view of the amendment filed on 08/08/2005, the Examiner withdraws the 35 USC § 112 rejections to claims 3 and 14 of the previous Office Action.

Claim Rejections - 35 USC § 102

In view of the amendment filed on 08/08/2005, the Examiner withdraws the 35 USC § 102 rejections to claims 1, 2, 4, 5, 7, 8, 12, 13, 15-17 and 19 of the previous Office Action.

Response to Arguments

Applicant's arguments filed on 08/08/2005 have been fully considered but they are not persuasive.

Regarding claims 9-11:

The Applicant contends, "Claims 9 and 12 have been analogously amended. Moriyama fails to disclose such".

The Examiner disagrees and asserts, that, in claim 9 the second filter is filtering the digital signal, so, the first and second digital filter are in parallel, as previously presented. For that reason the rejection of claims 9-11 are maintained.

Claim Rejections - 35 USC § 103

In view of the amendment filed on 08/08/2005, the Examiner withdraws the 35 USC § 103 rejections of the previous Office Action.

Claim Objections

Claims 3 and 14 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

As per claim 3, the recitation in lines 1-3 of claim 3 "the first digital filter and the second digital filter are arranged in series circuit such that the first filter output is coupled with the second filter input" is the same that the recitation in line 15 of claim 1 "a second digital filter having a second filter input coupled with the first filter output"

As per claim 14, the recitation in lines 1-3 of claim 14 "the first filtering module and the second filtering module are arranged in series circuit such that the first filter output is coupled with the second filter input" is the same that the recitation in line 15 of claim 1 a second filtering module for digitally filtering the first filter output".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Moriyama (US 6314144).

As per claim 9 Moriyama discloses a method for adjusting the headroom for a received signal in a radio receiver, the received signal including a target signal and an interference signal, the method comprising amplifying the received signal at an amplification level to form an amplified signal (figure 3 block 32 column 6 line 12); converting the amplified signal to a digital signal (figure 3 block 11-2 column 6 line 19-21); digitally filtering the digital signal at a first interference attenuation factor to produce a first filter output proportional to the magnitude of the interference signal when the interference signal is greater in magnitude than the target signal (figure 3 block 12-3 column 2 lines 26-37 and column 6 lines 37-48); adjusting the amplification level at which of the received signal is amplified based on the first digital filter output such that the difference between the maximum possible digital signal and the amplified signal is decreased when the interference signal is greater than the target signal and thereby to cause the amplification level to be proportional to the magnitude of the interference

signal (figure 3 block 19 column 6 lines 44-48); and digitally filtering the digital signal at a second interference attenuation factor (figure 3 block 12-2 column 6 lines 54-58).

As per claim 10 Moriyama discloses digitally filtering the digital signal at the first interference attenuation factor such that the first filter output is proportional to the magnitude of the target signal when the target signal is greater in magnitude than the interference signal (figure 26 column 3 line 60 to column 4 line 6).

As per claim 11 Moriyama discloses that the second interference attention factor is greater than the first interference attenuation factor (figure 3 blocks 12-2 and 12-3 column 3 lines 1-4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7, 8, 12-16 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moriyama (US 6314144) in view of Menkhoff (US 6822692 B2).

As per claim 1 Moriyama discloses a receiver circuit for adjusting the headroom for a received signal in a radio receiver, the received signal including a target signal and an interference signal, the circuit comprising: an amplifier coupled with the received signal such that the amplifier outputs an amplified signal, the amplification level of the amplifier being set by an amplifier control signal (figure 3 block 32 column 6 line 12); an analog-to-digital converter coupled with the amplified signal, the analog-to-digital

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converter outputting a digital signal where the digital signal is a digital representation of the amplified signal (figure 3 block 11-2 column 6 line 19-21); a first digital filter having a first filter input coupled with the digital signal, the first digital filter filters the digital signal at a first interference attenuation factor to produce a first filter output, the first filter output comprising the amplifier control signal, the first filter output being proportional to the magnitude of the interference signal when the interference signal is greater in magnitude than the target signal (figure 3 block 12-3 column 2 lines 26-37 and column 6 lines 37-48) thereby to cause the amplification level set by the amplifier to be proportional to the magnitude of the interference signal (figure 3 blocks 19 column 7 lines 40-49); and a second digital filter having a second filter input coupled with the first filter, the second digital filter at a second interference attenuation factor (figure 3 block 12-2 column 6 lines 54-58). Moriyama discloses that the first and second filters are in parallel. Moriyama doesn't disclose that the first and second filters are in series. Menkhoff discloses equivalent structures of digital filter connected in series and in parallel (figures 5 and 6 inputs 7 output 9 column 6 lines 28-53). Moriyama and Menkhoff are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first digital filter. Therefore, it would have been

obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 1.

As per claim 2 Moriyama and Menkhoff disclose claim 1. Moriyama also discloses the first digital filter and the second digital filter are low-pass digital filters (figure 3 blocks 12-2 and 12-3 are after block 10-2 LPF and they operate in baseband signals, so they are LPF column 6 lines 18-21). Moriyama and Menkhoff are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first digital filter. Therefore, it would have been obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 2.

As per claim 3 Moriyama and Menkhoff disclose claim 1. Menkhoff also discloses that the first digital filter and the second digital filter are arranged in series circuit such that the first filter output is coupled with the second filter input (figure 6 column 6 lines 28-49). Moriyama and Menkhoff are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first

digital filter. Therefore, it would have been obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 3.

As per claim 4 Moriyama and Menkhoff disclose claim 1. Moriyama also discloses that the amplification level of the amplifier is algebraically related to the amplifier control signal (figure 3 blocks 19 column 7 lines 40-49). Moriyama and Menkhoff are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first digital filter. Therefore, it would have been obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 4.

As per claim 5 Moriyama and Menkhoff disclose claim 1. Moriyama also discloses that the amplification level of the amplifier is linearly proportional to the amplifier control signal (figure 3 block 19 column 7 lines 40-49). Moriyama and Menkhoff are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first digital filter. Therefore, it would have been

obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 5.

As per claim 7 Moriyama and Menkhoff disclose claim 1. Moriyama also discloses that the first filter output is proportional to the magnitude of the target signal when the target signal is greater in magnitude than the interference signal (figure 26 column 3 line 60 to column 4 line 6). Moriyama and Menkhoff are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first digital filter. Therefore, it would have been obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 7.

As per claim 8 Moriyama and Menkhoff disclose claim 1. Moriyama also discloses that the second attention factor is greater than the first attenuation factor (figure 3 blocks 12-2 and 12-3 column 3 lines 1-4). Moriyama and Menkhoff are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first digital filter. Therefore, it would have been

obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 8.

As per claim 12 Moriyama discloses a system for adjusting the headroom for a received signal in a radio receiver, the received signal including a target signal and an interference signal, the system comprising: an amplification module for amplifying the received signal at an amplification level to form an amplified signal (figure 3 block 32 column 6 line 12); a conversion module for converting the amplified signal to a digital signal (figure 3 block 11-2 column 6 line 19-21); a first filtering module for digitally filtering the digital signal at a first interference attenuation factor to produce a first filter output proportional to the magnitude of the interference signal when the interference signal is greater in magnitude than the target signal (figure 3 block 12-3 column 2 lines 26-37 and column 6 lines 37-48); an adjusting module for adjusting the amplification level of the received signal based on the first filter output such that the difference between the maximum possible digital signal and the amplified signal is decreased when the interference signal is greater than the target signal and thereby to cause the amplification level to be proportional to the magnitude of the interference signal (figure 3 block 19 column 6 lines 44-48); and a second filtering module for digitally filtering the digital signal at a second interference attenuation factor (figure 3 block 12-2 column 6 lines 54-58). Moriyama doesn't disclose that the first and second filters are in series. Menkhoff discloses equivalent structures of digital filter connected in series and in parallel (figures 5 and 6 inputs 7 output 9 column 6 lines 28-53). Moriyama and Menkhoff are analogous art because they are from the same field of endeavor. At the

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time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first digital filter. Therefore, it would have been obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 12.

As per claim 13 Moriyama and Menkhoff disclose claim 12. Moriyama also discloses that the first filtering module and the second filtering module are low pass digital filters (figure 3 blocks 12-2 and 12-3 are after block 10-2 LPF and they operate in baseband signals, so they are LPF column 6 lines 18-21). Moriyama and Menkhoff are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first digital filter. Therefore, it would have been obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 13.

As per claim 14 Moriyama and Menkhoff disclose claim 12. Menkhoff also discloses that the first digital filter and the second digital filter are arranged in series circuit such that the first filter output is coupled with the second filter input (figure 6

column 6 lines 28-43). Moriyama and Menkhoff are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first digital filter. Therefore, it would have been obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 14.

As per claim 15 Moriyama and Menkhoff disclose claim 12. Moriyama also discloses that the amplification level of the amplifier is algebraically related to the amplifier control signal (figure 3 blocks 19 column 7 lines 40-49). Moriyama and Menkhoff are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first digital filter. Therefore, it would have been obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 15.

As per claim 16 Moriyama and Menkhoff disclose claim 12. Moriyama also discloses that the amplification level of the amplifier is linearly proportional to the amplifier control signal (figure 3 block 19 column 7 lines 40-49). Moriyama and

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Menkhoff are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first digital filter. Therefore, it would have been obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 16.

As per claim 19 Moriyama and Menkhoff disclose claim 12. Moriyama also discloses that the second interference attenuation factor is greater than the first interference attenuation factor (figure 3 blocks 12-2 and 12-3 column 3 lines 1-4). Moriyama and Menkhoff are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first digital filter. Therefore, it would have been obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 19.

As per claim 20 Moriyama and Menkhoff disclose claim 12. Moriyama also discloses that the first filter output is proportional to the magnitude of the target signal when the target signal is greater in magnitude than the interference signal (figure 26

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column 3 line 60 to column 4 line 6). Moriyama and Menkhoff are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the parallel structures of digital filters disclosed by Menkhoff with the receiver disclosed by Moriyama. The suggestion/motivation for doing so would have been to reduce the cost and complexity of the second digital filter, taking advantage of the already filtered signal from the first digital filter. Therefore, it would have been obvious to combine Moriyama and Menkhoff to obtain the invention as specified in claim 20.

Claims 6, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moriyama (US 6314144) and Menkhoff (US 6822692 B2) as applied to claims 1 and 12, and further in view of Linder (US 5990815 A).

As per claim 6 Moriyama and Menkhoff disclose claim 1. Moriyama and Menkhoff don't disclose that the analog-to-digital converter is a sigma-delta analog-to-digital converter. Linder discloses an analog-to-digital converter that is a sigma-delta analog-to-digital converter (column 1 lines 15-28). Moriyama, Menkhoff and Linder are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate in the digital filters disclosed by Moriyama and Menkhoff the sigma delta ADC disclosed by Linder. The suggestion/motivation for doing so would have been to use one of the most popular circuit designs for ADCs (column 1 lines 15-28). Therefore, it would have been obvious to combine Moriyama and Menkhoff with Linder to obtain the invention as specified in claim 6.

As per claim 17 Moriyama and Menkhoff disclose claim 12. Moriyama and Menkhoff don't disclose that the digital signal provided by the conversion module comprises a binary coded decimal signal. Linder discloses digital signal provided by the conversion module comprises a binary coded decimal signal (figure 1 block 26 inside of block 10 column 5 lines 8-25). Moriyama, Menkhoff and Linder are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate in the digital filters disclosed by Moriyama and Menkhoff the binary coded decimal signal ADC disclosed by Linder. The suggestion/motivation for doing so would have been to implement any one of several encoding schemes (column 2 lines 10-26). Therefore, it would have been obvious to combine Moriyama and Menkhoff with Linder to obtain the invention as specified in claim 17.

As per claim 18 Moriyama, Menkhoff and Linder disclose claim 17. Linder also discloses an analog-to-digital converter that is a sigma-delta analog-to-digital converter (column 1 lines 15-28). Moriyama, Menkhoff and Linder are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate in the digital filters disclosed by Moriyama and Menkhoff the sigma delta ADC disclosed by Linder. The suggestion/motivation for doing so would have been to use one of the most popular circuit designs for ADCs (column 1 lines 15-28). Therefore, it would have been obvious to combine Moriyama and Menkhoff with Linder to obtain the invention as specified in claim 18.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

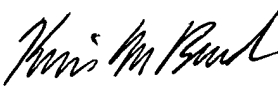
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is (571) 272-3119. The examiner can normally be reached on Monday-Friday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Juan Alberto Torres, Ph. D.
08-29-2005


KEVIN BURD
PRIMARY EXAMINER